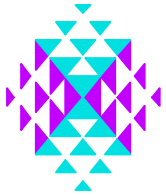

ScottishPower

Greenhouse Gas Registries and Renewable Energy

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My Applicable Background

- Helped to draft the Power Utility Protocol of the California Climate Action Registry (CCAR)
- Overseeing PacifiCorp's first report to the CCAR
- Oversaw monitoring and verification of PPM Energy CO2 offset projects
- Actively engaged in greenhouse gas (GHG) policy deliberations at state and federal level
- Provide guidance to Blue Sky retail green power program design
- Active in renewable policy development at state and federal level

Outline of Presentation

- Relevance
- Basic approach to entity-level accounting
- Treatment of on-site renewables, PPAs and RECs
- Project-level accounting considerations
- Sources for more info

Why care about GHG registries?

- Registries can create the right accounting rules around GHGs to avoid “Enron accounting” nonsense
- Registries offer a stronger case for “early action” credit in future GHG regulatory regimes
- Therefore…Strengthens claims for customers interested in reducing emissions, and offers more credence to possible early action credit for investments in renewables made today
- Plus, it is something we all may have to deal with whenever regulations arrive—practice makes perfect

3 Registries to Discuss Today

- WRI GHG Protocol
  - Based on extensive international process
  - Tracks Kyoto accounting standards
- CA Climate Action Registry
  - Created by state legislation
  - Not mandatory, though all major utilities participate
  - Rooted in WRI GHG Protocol
- U.S. DOE 1605b
  - Created by 1992 Energy Policy Act
  - Revisions to be completed in 2006
  - Previous version seen too loose

Steps to Registering Your Entity's Emissions

Step 1: Define your geographic and organizational boundaries

Step 2: Establish a baseline year of emissions data

Step 3: Quantify your emissions (vehicles, smokestacks, boilers, energy purchases, etc.)

Step 4: Pass the 3rd-party certification of your data

Basics of GHG Registries

- Accounting boundaries
  - Emissions from facilities that you own or control (*Direct emissions*) – e.g., On-site PV
  - Emissions from facilities you do not own or control, but whose energy you are buying (*Indirect emissions* – e.g., power purchase agreements from wind plants
- Note that you must adjust your baseline if you significantly shrink your boundary (e.g., closing a factory)
- Two Main Registry Functions
  - Account for emissions from an entire *entity* (company, city, etc.)
  - Account for emissions reductions from a single *project* (wind project, biogas, etc.)
  - Focus today is on entity reporting since project accounting is still under development

Boundaries and emissions definitions

- If you own or control an asset that produces emissions, then you have *direct* emissions
- If you buy a product such as energy that is associated with emissions, then you have *indirect* emissions
  - Indirect emissions associated with energy is main focus of registries—not indirects with other products

Establishing a Baseline Year

- CCAR, WRI and 1605b serve as methods to track reductions
- Each program requires you to set a *baseline*
  - 1605b: Baseline can be a multiyear period, provided the period ends after 2002 (and your reporting begins)
  - CCAR: Baseline based on when you begin reporting
  - WRI: Can be one year or multiple years
- All of them allow you to track reductions on an absolute (tons) or intensity (tons per unit) basis

Quantifying Reductions: On-site Renewables

- On-site renewable generation that directly displaces on-site, emitting generation will cut *direct* emissions
- On-site renewable generation that displaces purchased power will cut *indirect* emissions
- All registries treat PV and wind as zero-emission sources
- Biomass treated a bit differently
  - Biomass is considered a part of the natural carbon cycle, unlike fossil fuels
  - USDOE and CCAR treat biomass as net zero emissions
  - WRI has a separate reporting category, though not added to a company's direct emissions

Quantifying Reductions: Renewable Power Purchases

- If a PPA offsets emissions from owned/controlled facilities, then it is cutting *direct* emissions
- If a PPA offsets PPAs from emitting power plants, then it is cutting *indirect* emissions
- Recognition that a switch from a fossil plant to a renewable plant does not mean the fossil plant will emit less
  - Someone else will buy the power and increase their indirect emissions

Quantifying Reductions: Renewable Energy Certificates

- CCAR has not yet formally recognized REC purchases in calculations of direct or indirect emissions
  - CCAR permits “optional reporting” of REC purchases so that they are at least listed in a reporting entity’s public report
- WRI allows REC buyers to report RECs under an “Optional” category for the buyer’s inventory and targets
- 1605(b) does not address RECs, though federal Climate Leaders program recognizes RECs purchases towards reporters’ goals

Calculating Avoided Emissions

- For *direct* emissions reductions, calculate total emissions
  - Direct measurement
  - Formulas adopted by protocols
- For *indirect* emissions, try to be as specific as possible
  - CCAR: Plant > Utility mix > regional mix
  - WRI: Plant > Power pool > National
  - USDOE: Plant > Utility > NERC Region
  - Requires data from specific databases
  - Grid mix expressed as an average

A Note About Project-Level Reporting

- Still to be developed by WRI, CCAR and USDOE
- Key questions to answer
  - What would have happened instead of my renewable energy project? (Baseline)
  - Would the project not have happened without my support? (Additionality)
  - Is this project inducing activities that will increase emissions elsewhere? (Leakage)
  - Is there a good plan for monitoring the project's emissions and obtaining 3rd-party verification? (M&V)
- May be very important in the future for renewables supported by RECs purchases

So What Can You Do?

- If you are buying renewable energy to reduce your GHG emissions and get future credit, consider reporting to a registry
- If you are building a renewable energy project that is to be supported by CO2 purchases or RECs purchases, you should pay attention to project-level accounting and even learn about the CDM to strengthen your and your customers' claims

For more information

WRI GHG Protocol:
www.ghgprotocol.org

California Climate Action Registry:
www.climateregistry.org

US DOE 1605(b):
www.pi.energy.gov/enhancingGHGregistry

CDM Board:
cdm.unfccc.int/methodologies

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